IN THE CLAIMS:

1. (Previously Presented) An atmospheric pressure plasma assembly (1) comprising a first and second pair of vertically arrayed, parallel spaced-apart planar electrodes (36) with at least one dielectric plate (31) between the first pair, adjacent one electrode and at least one dielectric plate (31) between the second pair adjacent one electrode, the spacing between the dielectric plate and the other dielectric plate or electrode of each of the first and second pairs of electrodes forming first and second plasma regions (25,60) characterised in that the assembly further comprises a means of transporting a substrate (70,71,72) successively through the first and second plasma regions (25,60) and an atomizer (74) adapted to introduce an atomized liquid or solid coating making material into one of the first or second plasma regions.

2. (Previously Presented) An assembly in accordance with claim 1 wherein the substrate is transported through the first and second plasma regions by means of at least one of guide rollers and/or guide reels (70, 71, 72).

3. (Previously Presented) An assembly in accordance with claim 1 wherein each electrode comprises an electrode unit containing an electrode (36), an adjacent dielectric plate (31) and a cooling liquid distribution system (20,26) for directing a cooling conductive liquid onto the exterior of the electrode (36) to cover a planar face of the electrode (36).

4. (Original) An assembly in accordance with claim 3 wherein the cooling conductive liquid is water.

5. (Previously Presented) An assembly in accordance with claim 3 wherein the electrode unit is in the form of a watertight box (20, 20a, 26) having a side formed by a dielectric plate (31) having bonded thereto, on the interior of the box (20,20a, 26), a planar electrode (36) together with a liquid inlet (14) and a liquid outlet (15).

6. (Previously Presented) An assembly in accordance with claim 1 further comprising an outer casing in which a lid (76) is provided to prevent escape of a process gas which is required in order to activate a plasma.

7. (Previously Presented) An assembly in accordance with claim 1 wherein the atomizer (74) is an ultrasonic nozzle.

8. (Previously Presented) An assembly in accordance with claim 1 wherein the electrode (36) is a dielectric with a metallic coating.

9. (Previously Presented) An atmospheric pressure glow discharge assembly in accordance with claim 1.

10. (Previously Presented) An atmospheric plasma assembly for preparing multilayer coatings upon flexible substrates in accordance with claim 1 wherein plasma is generated between vertically orientated electrodes (36), which are arranged in series and adapted to enable single pass, multiple treatment or multilayer coatings.

Claims 11-24. (Cancelled).

25. (Previously Presented) An assembly in accordance with claim 1, further comprising at least one additional pair of vertically orientated electrodes (36) situated before or after the first and second pairs of electrodes.